Reconsideration and allowance of this application are respectfully requested in light of the above amendments and the following remarks.

Claims 1-3 and 6 have been canceled in favor of new claims 7-9, and claims 4 and 5 have been amended to depend from claim 7. The amendments have been drafted to overcome the objections applied to claims 1-6 and obviate the rejections applied to claim 6. Support for the amendments is provided for example in original claims 1-3 and the specification on page 6, line 23, through page 7, line 7, page 9, line 25, through page 10, line 13, and page 15, line 21, through page 16, line 25. (References herein to the specification and drawings are for illustrative purposes only and are not intended to limit the scope of the invention to the referenced embodiments.)

Claims 1-5 were provisionally rejected for non-statutory, obviousness-type double patenting. The Applicant will address the double patenting rejections when the provisional status of the rejections is removed.

Claims 1-6 were rejected, under 35 USC §102(c), as being anticipated by Blankenship et al. (US 6,952,457). To the extent these rejections may be deemed applicable to the amended claims, the Applicant respectfully traverses based on the points set forth below.

New claim 7 defines a decoding apparatus having "n" processing systems that each compute in parallel: (1) a forward probability corresponding to a current time point indexed k from a forward probability corresponding to an earlier time point, indexed k-n; (2) a backward probability corresponding to a current time point indexed k from a backward probability corresponding to a later time point, indexed k+n; and (3) likelihood information using the

computed forward and backward probabilities. The claimed subject matter supports calculating likelihood information at high speed while suppressing increases in the amount of processing and circuit scale (see specification page 11, lines 3-6).

Blankenship discloses that a window "n" may be processed at the same time as, or before, windows n-1 and n+1 (see Blankenship Figs. 1 and 2 and col. 3, lines 47-50). However, Blankenship does not disclose a plurality of processing systems that perform processing in parallel within a single window, as recited in Applicant's claim 7. Thus, Blankenship does not identically disclose the subject matter defined by Applicant's claim 7.

Accordingly, the Applicant respectfully submits that Blankenship does not anticipate the subject matter defined by claim 7. Therefore, allowance of claim 7 and all claims dependent therefrom is warranted.

To promote a better understanding of the patentable distinctions of the Applicant's claimed subject matter over Blankenship, the Applicant provides the following additional remarks.

Claim 7 recites a plurality of processing systems that each compute in parallel, for a window, a: (1) forward probability computation, (2) backward probability computation, and (3) likelihood computation. Each of the processing systems computes different forward probabilities (backward probabilities) within the window. For example, if a window encompasses thirty probabilities and ten processing systems are applied, in parallel, to compute the ten probabilities, then all thirty of the probabilities may be computed in three iterations of parallel processing by having each of the ten processing systems compute three probability computations that differ from all other probability computations within the window.

In an exemplary, but non-limiting, embodiment of the claimed invention having two processing systems, as illustrated in Fig . 5A, a first processing system performs computations on even-numbered computation target symbols and a second processing system performs computations on odd-numbered computation target symbols. More specifically, the first processing system obtains computation results of the backward probability according to the computation target symbols in the order of 126, 124, ... , 2, 0, while the second processing system obtains computation results of the backward probability according to the computation target symbols in the order of 127, 125, ... , 3, 1. For the forward probability, the first processing system performs computations on the even-numbered computation target symbols and the second processing system performs computations on the odd-numbered computation target symbols. By this means, in a stage where the backward probability is computed on the window, two processing systems are able to compute the likelihood whenever computing the forward probability on respective computation target symbols.

By contrast to the Applicant's claimed subject matter, Blankenship discloses preparing a plurality of windows and processing a plurality of windows in parallel. Blankenship does not disclose or suggest parallel processing by a plurality of processing systems in the windows. Thus, Blankenship does not identically disclose the above-noted features of the Applicant's claimed invention.

With regard to the double patenting rejections applied to claims 1 and 6, Applicant notes that the international filing date of Pan et al. (US 2003/0110438) comes after the international filing date of the present application.

In view of the above, it is submitted that this application is in condition for allowance, and a notice to that effect is respectfully solicited.

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,

/James Edward Ledbetter/

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JEL/DWW/att

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